

PARK Pre-Assessment

The purpose of this assessment is to determine your comfort level teaching geology content and your understanding of geological processes. Please do not be concerned if you are unable to answer some of the questions.

College Campus _____ Date _____
Birthdate: ___/___/___ Gender: M or F Ethnicity: _____
Teaching Status (Check all that apply)
 Student Teaching Fall 05 Student Teaching Winter 06 Student Teaching Spring 06
 Student Teaching Fall 06 Student Teaching Winter 07 Student Teaching Spring 07
 First Yr Teacher Second Yr Teacher
 Other _____

1. Please **circle** whether you strongly agree, agree, disagree or strongly disagree with each of the following statements.

A. I am/will be teaching geology and/or geologic processes in my teaching/student teaching placement within the next year.

Strongly agree Agree Disagree Strongly disagree

B. I am confident in my geology content knowledge.

Strongly agree Agree Disagree Strongly disagree

C. I am confident in my ability to **teach** students about plate tectonics and geological processes.

Strongly agree Agree Disagree Strongly disagree

D. I learned most of my geology knowledge through coursework.

Strongly agree Agree Disagree Strongly disagree

E. I learned most of my geology knowledge through outdoor experiences.

Strongly agree Agree Disagree Strongly disagree

F. I think geology is an interesting topic.

Strongly agree Agree Disagree Strongly disagree

G. I know about the educational resources available at a national park.

Strongly agree Agree Disagree Strongly disagree

H. Next year, I plan to take my students on a field trip to a national park.

Strongly agree Agree Disagree Strongly disagree

2. I would like you to know the following about my academic background in geology and/or my geology teaching experiences:

3. What is the process that drives the movement of tectonic plates? (Circle A, B, or C)
- A. Convection currents within the Earth's inner core.
 - B. Absorption of heat from the sun and its transmission through the atmosphere, oceans, and solid crust.
 - C. Release of residual heat and radioactive decay of elements within the Earth.

4. Check all of the processes that cause metamorphism in rocks:

Heat
 Alteration by seawater
 Absorption of solar energy
 Pressure

5. Match the rocks to their rock type:

Rock Type	Rocks
A. Sedimentary	1. <input type="checkbox"/> Sandstone
B. Metamorphic	2. <input type="checkbox"/> Granite
C. Igneous	3. <input type="checkbox"/> Serpentinite
	4. <input type="checkbox"/> Basalt
	5. <input type="checkbox"/> Chert
	6. <input type="checkbox"/> Greenstone

6. Check all of the locations where subduction of a tectonic plate is occurring today:

<input type="checkbox"/> San Francisco	<input type="checkbox"/> Mendocino
<input type="checkbox"/> Iceland	<input type="checkbox"/> Japan
<input type="checkbox"/> West Africa	<input type="checkbox"/> Seattle
<input type="checkbox"/> Sumatra	<input type="checkbox"/> Los Angeles

7. Which of the following statements is true? (Circle A, B, or C)
- A. The Franciscan rocks provide evidence of glacial scouring during the last ice age.
 - B. The Franciscan rocks provide evidence of the formation, transport and crumpling of a slab of seafloor.
 - C. The Franciscan rocks provide evidence of past volcanic activity as well as an ancient tropical forest.

8. Using the map of rocks of the Marin Headlands, how would you explain the mixture and pattern of these rocks?